

REMARKS

This amendment is responsive to the Office Action mailed July 12, 2006. Applicants thank the Examiner for allowing Claims 11-17, 37, and 38.

The Office Action rejected Claims 1-6, 9-10, 20-29, and 30-36. Claims 20-27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,606,323 ("Heinrich") in combination with U.S. Patent No. 6,072,421 ("Fukae"), U.S. Patent No. 6,456,668 ("MacLellan"), and U.S. Patent No. 5,521,602 ("Carroll"). Claims 9-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,646,543 / WO 9839725 ("Mardinian"), in combination with U.S. Patent No. 5,841,770 ("Snodgrass"). Claims 1-2 and 5-6 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mardinian in combination with Snodgrass and further in view of MacLellan or Carroll. Claims 3-4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mardinian in combination with Snodgrass and MacLellan or Carroll, and further in view of U.S. Patent No. 5,307,349 ("Shloss"). Claim 33 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Mardinian in combination with Snodgrass and MacLellan or Carroll and further in view of U.S. Patent No. 5,686,902 ("Reis"). Claims 34-36 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mardinian in combination with Snodgrass and MacLellan or Carroll, and further in view of U.S. Patent No. 4,479,194 ("Fogg"). Lastly, Claims 28-29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,745,037 ("Guthrie") in combination with U.S. Patent No. 5,963,104 ("Buer") or U.S. Patent No. 4,355,366 ("Porter").

Claims 6-8, 18-19, 28-32, and 39-49 have been canceled without prejudice. Claims 1, 4, 9, 20, 33, and 34 have been amended to further clarify the claim language. Claims 50-56 have been added. Thus, Claims 1-5, 9-17, 20-27, 33-38, and 50-56 are pending.

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Applicants have carefully considered each of the cited references and the remarks made in the Office Action and submit that the claims presented above are in patentable condition. Reconsideration of the application and allowance of all the claims at an early date is respectfully requested.

Rejection of Claims 1-6, 9-10, 20-29, and 33-36 Under 35 U.S.C. § 103(a)

As noted above, Claims 6 and 28-29 have been canceled with prejudice, thus rendering the rejection of these claims moot. Applicants respectfully submit that Claims 1-5, 9-10, 20-27, and 33-36 are allowable for at least the reasons presented below.

Claims 1-5 Are Patentable Over the Cited References

Amended independent Claim 1 recites, *inter alia*, "said RFID transponders being further configured to use said random number generator to generate a unique identification code based only on a first random number generated by said random number generator, each said unique identification code being associated with a respective RFID transponder." Mardinian does not teach or suggest a unique identification code generated based only on a random number generated by the random number generator, as recited in Claim 1. Mardinian discloses a response message that contains the serial number of a badge which is a unique number making it possible to identify the badge. Mardinian further discloses that the unique number identifying the badge may include the serial number together with the manufacturer number (Col. 5, lines 47-54). Snodgrass fails to supply the teachings missing from Mardinian. Snodgrass discloses a LOCAL ID in format 142 as a unique identification number assigned by the communication system installer to each commander station 10 (Col. 11, lines 11-14). Snodgrass further discloses that an IDC message causes each responder station to generate a random number and retain it as its arbitration number (Col. 13, lines 46-49). Additionally, with respect to Figure 9, Snodgrass discloses that response formats 192-196 include LOCAL ID,

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ARBITRATION NUMBER, and TAG. By including LOCAL ID and ARBITRATION NUMBER in each response, a responder station can respond unambiguously to a commander station in the presence of a plurality of commander and responder stations (Col. 12, lines 6-13). Therefore, with respect to Figure 9, Snodgrass discloses that every response by a responder station includes at least an ARBITRATION NUMBER and LOCAL ID, wherein the ARBITRATION NUMBER is generated by a random number generator but the LOCAL ID is assigned by a communication system installer. Therefore, no response provided by a responder station includes a unique identification code for the responder station based only on a random number generated by the random number generator, as recited in Claim 1. Therefore, amended Claim 1 is allowable for at least the reasons presented above.

Claims 2-5 depend from Claim 1 and are submitted to be allowable for at least the same reasons presented above with respect to Claim 1.

Claims 9-10 Are Patentable Over the Cited References

Amended independent Claim 9 recites, *inter alia*, "transmitting a re-select identification code command to a plurality of RFID transponders; in response to receiving the re-select identification code command, generating, at said plurality of RFID transponders, a first random number and calculating a new identification code based only upon said first random number" (emphasis added). Mardinian does not teach or suggest in response to transmitting a re-select identification command code generating a new identification code based only upon a first random number. Mardinian discloses a GENCALL message from the transmitting terminal containing a PMP number, in response to which the badge transmits a GENREP response message which contains the serial number of the badge (Col. 5, lines 15-17; lines 47-50). As noted above with respect to Claim 1, Mardinian does not teach or suggest a unique identification code for the badge which is based only upon a random number, as recited in amended Claim 9.

Furthermore, Mardinian does not teach or suggest generating such identification code in response to transmitting a re-select identification code command. Snodgrass fails to supply the teachings missing from Mardinian. As noted above with respect to Claim 1, Snodgrass discloses a responder station that includes a LOCAL ID and an ARBITRATION NUMBER in each response (Col. 12, lines 6-13). Snodgrass further discloses, in FIGURE 8, the responses to all the commands (FIGURE 5). Notably, Snodgrass does not teach or suggest a re-select identification code command. Additionally, Snodgrass does not teach or suggest generating a unique identification code based only upon a random number in response to receiving the re-select identification code command. Therefore, amended Claim 9 is submitted to be allowable for at least the reasons presented above.

Claim 10 depends from Claim 9 and is submitted to be allowable for at least the same reasons presented above with respect to Claim 9.

Claims 20-27 Are Patentable Over the Cited References

Amended Claim 20 recites, in relevant portion, "a random number generator operable to generate a random number from which a unique ID for the transponder is generated." Heinrich does not teach or suggest a random number generator as set forth in Claim 20. Heinrich is directed at radio frequency transponders (RF tags) which receive RF electromagnetic radiation from a base station. More specifically, Heinrich discloses a diode modulator which changes the loading of the RF transponder antenna between a first and a second state (Col. 2, lines 49-60). Heinrich does not disclose any information regarding a unique ID for the transponders. Fukae fails to supply the teachings missing from Heinrich. Fukae discloses a pseudo-random noise code PN2 generated by the transponder 44. Fukae further discloses that the code PN2 is different for each transponder/vehicle because the code will include an identification code unique to each vehicle and an identification code unique to each transponder (Col. 6, lines 52-67).

Furthermore, Fukae discloses that each transponder has a unique ID signal associated therewith and that as the ID of each transponder is transmitted, the vehicle will know its position as it passes each transponder (Col. 7, lines 20-30). Fukae does not teach or suggest a random number from which a unique ID for the transponder is generated. MacLellan fails to supply the teachings missing from Fukae and Heinrich. MacLellan discloses a quadrature phase shift keying (QPSK) in a modulated back scattering system. MacLellan further discloses that a back scatter modulator modulates the reflection of the radio signal for transmission to an interrogator (Col. 2, lines 1-12). Carroll fails to supply the teaching missing from MacLellan, Fukae, and Heinrich. Carroll discloses mask bits 108 and type bits 110 that establish a unique identification number for a particular transponder 40. However, Carroll further discloses that the mask bits 108 may be set during the initial processing or manufacture of the integrated circuit 46 (Col. 15, lines 52-57). Therefore, amended Claim 20 is submitted to be allowable for at least the reasons presented above.

Claims 21-27 depend from Claim 20 and are submitted to be allowable for at least the same reasons presented above with respect to Claim 20.

Claims 33-36 Are Patentable Over the Cited References

Amended independent Claim 33 recites, *inter alia*, "... an identification code from a plurality of RFID transponders, each of said RFID transponders having a unique identification code that is generated based only on a first random number generated by a respective RFID transponder." As noted above, Mardinian, Snodgrass, MacLellan, and Carroll do not teach or suggest a unique identification code generated based only on a random number, as recited in Claim 33. Reis fails to supply the teachings missing from Mardinian, Snodgrass, MacLellan, and Carroll.

Reis teaches that identification of tags occurs through organized transmission and reception of signals between the tags and the interrogator (Col. 6, lines 33-35). Reis further discloses that, to perform inventory functions, the interrogator employs a batch collection protocol wherein communication signals are processed during a batch session. The batch session includes a plurality of collection periods, each collection period comprising a listen period and an acknowledge period (Col. 6, lines 62-67). Tags are identified during the listen period by transmitting tag identifying signals (Col. 7, lines 6-8). Each tag has a unique tag ID that distinguishes all tags from each other. The tag ID is typically stored in the tag memory (Col. 13, lines 28-30). Reis also discloses that in SEND RESPONSE state 96, the tag sends its address code (tag ID), prefixed with a preamble, back to the interrogator. The response comprises a preamble, the tag address (ID code), and status code information (Col. 44, lines 22-25). Figure 3 of Reis discloses the internal structure of a tag 8. Figure 3 does not include a random number generator. Therefore, Reis does not teach or suggest a unique identification code for the tag that is generated based only on a random number, as recited in Claim 33. Therefore, amended Claim 33 is submitted to be allowable for at least the reasons presented above.

Amended independent Claim 34 recites, in relevant portion, "said RFID transponders being further configured to use said random number generator to generate a unique identification code based only on a first random number generated by said random number generator, each said unique identification code being associated with a respective RFID transponder." As noted above with respect to Claim 33, Mardinian, Snodgrass, MacLellan, and Carroll do not teach or suggest a unique identification code generated based only on a random number. Fogg fails to supply the teachings missing from Mardinian, Snodgrass, MacLellan, and Carroll. Fogg is directed to a system and method for reading marks on a document and, more particularly, for detecting vote marks on an election ballot card (Col. 1, lines 5-8). Fogg does not teach or

suggest an RFID transponder having a unique identification code generated based only on a random number, as recited in Claim 34. Therefore, Claim 34 is submitted to be allowable for at least the reasons presented above.

Claims 35 and 36 depend from Claim 34 and are submitted to be allowable for at least the same reasons presented above with respect to Claim 34.

New Claims 50-56 Are Patentable Over the Cited References

For reasons similar to those presented above, Claims 50-56 are also believed to be patentable over the cited art, and thus are submitted to be in allowable condition. Independent Claim 50 recites, in part, "in response to receiving a re-select identification code command, generating a first random number and calculating an identification code for said RFID transponder based only upon said first random number." Independent Claim 52 recites, in part, "a random number generator configured to generate a first random number in response to receiving a re-select identification code command at said receiver; a controller configured to generate an identification code for said RFID transponder based only upon said first random number." Independent Claim 55 recites, in part, "each said RFID transponder having a random number generator operable to generate a first random number ...[and] a controller configured to generate a unique identification code for said RFID transponder based on said first random number, and wherein said unique identification code is associated with said RFID transponder without depending on a predetermined identifier of the respective RFID transponder." Claim 55 further recites:

wherein said random number generator is further configured to generate a second random number when said respective RFID transponder receives both a read identification code command and a variable having a value, said controller being further configured to compare the value of said

variable with said second random number and, based on the comparison, cause a transmitter to transmit said unique identification code of said RFID transponder, after which said controller is configured to become inactive such that said RFID transponder does not respond to further read identification code commands received by said receiver during a current read identification code process.

Allowance of Claims 50-56 is requested.

CONCLUSION

In view of the foregoing amendments and remarks, applicants submit that the present application is in condition for allowance. Early action to that end is respectfully requested. Should any issues remain needing resolution prior to allowance, the Examiner is invited to contact applicants' attorney at the telephone number indicated below.

Respectfully submitted,

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